Iowa Department of Natural Resources
Environmental Protection Commission

ITEM **7** **DECISION**

TOPIC **Kirkwood Community College Industrial Electro-Mechanical Technician Curriculum Development Contract — Industrial Technologies Grant**

The Department received a grant from the U.S. Department of Energy in the amount of $149,971. Pursuant to that grant the Department executed a contract in the amount of $90,000 with Des Moines Area Community College (DMACC). The DMACC contract term expired with only partial performance and payment. Consequently, the Department now intends to execute a contract in the amount of the unspent balance of the DMACC contract, $78,379.30, with Kirkwood Community College (Kirkwood) for the completion of the project. Kirkwood provides industrial education to current workers and traditional students in the areas of Industrial Electro-Mechanical Technology, Heating/Cooling and Refrigeration Technology, and Building Maintenance.

Kirkwood Community College will provide $32,697.39 worth of Cost Share. The Iowa businesses not directly included in this contract that previously pledged an additional $31,600 worth of Cost Share will carry through on their original commitments: Cargill--$7,000; Accumold--$5,000; EMCO--$3,600; Check-All Valve Mfg.--$6,000; and the Iowa Energy Center--$1,500 and up to $8,500 in scholarship assistance to Kirkwood students and faculty. These businesses together with Kirkwood will provide a total of $64,297.39 worth of Cost Share to ensure the final success of this project.

The purpose of the grant and the contract with Kirkwood Community College is to formulate the structure, curriculum and content for a program in industrial energy efficiency and waste minimization processes for delivery at community colleges. One of the most important issues facing industry today is the rising cost of energy. Industries are continually looking for ways to reduce their energy costs by balancing the load and demand of their energy power systems to obtain optimum system performance.

The current manufacturing workforce expects to experience a wave of retirements in the next 5-10 years. The work done under this contract will develop appropriate education and training classes that will replenish the workforce to have a focus on energy performance optimization and waste minimization practices that will help companies reduce costs and maximize profits. Students who complete the program will be ready for a technical career in manufacturing industries, with an emphasis on industrial energy efficiency and waste minimization. In addition, the curriculum will enable Iowa manufacturers to provide this training for their current employees.

DNR Contract Value	Cost Share Providers
$78,379.30	Kirkwood Community College: $32,697.39

	Cargill: $7,000
	Accumold: $5,000
	EMCO: $3,600
	Check-All Valve Mfg.: $6,000
	Iowa Energy Center: $1,500 plus up to $8,500 in student and faculty scholarships

The Department requests the Commission's approval to enter into a contract with Kirkwood Community College.

A description of the project and its funding is attached.

Bill Blum
Program Planner 3
Energy and Waste Management Bureau
Environmental Services Division

June 27, 2006

Industrial Technologies Grant-Funded Contract for

Industrial Electro-Mechanical Technician Curriculum Development – July 2006

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CONTRACT RECOMMENDATION ABOVE $25,000

Kirkwood Community College 6301 Kirkwood Blvd. S.W. P.O. Box 2068 Industrial Technologies Department 105 Jones Hall Cedar Rapids, Iowa 52406	**Contract Amount:** **Total Contracted Cost Share:** Cash Cost Share: $0 In-Kind Cost Share: $32,697.39	**$78,379.30** **$32,697.39**
	Total Contracted Project Cost:	**$111,076.69**

Project Title: **Industrial Electro-Mechanical Technician Curriculum Development**

Contact: Phil Thomas Phone: 319-398-4983

Applicant: Kirkwood Community College pursuant to authority of Iowa Code, Section 28E.12 and the 1990 Iowa Acts

Description: The Iowa Department of Natural Resources proposes to work with Kirkwood Community College, industry and other stakeholders to formulate the structure, curriculum, and content for a program in industrial energy efficiency and waste minimization processes. One of the most important issues facing industry today is the rising cost of energy. Industries are continually looking for ways to reduce their energy costs by balancing the load and demand of

their energy power systems to obtain optimum system performance. One way to help industries balance their load versus demand is to incorporate 'Best Practices' into a curriculum that both targets the next generation of technical workers and provides continuing education opportunities for current employees.

The proposed curriculum for the Industrial Electro-Mechanical Technician program will focus on the incorporation of 'Best Practices' publications and software developed nationally with state partners by the Department of Energy's Office of Industrial Technology. Effective energy management and waste minimization measures in core systems such as motor drive, pumping, compressed air, and steam systems are key components of this education. Cutting energy consumption and waste generation improves operation efficiency and worker health and safety, while reducing liability and compliance issues.

The current manufacturing workforce expects to experience a wave of retirements in the next 5-10 years. The work done under this contract will develop appropriate education and training classes that will rebuild a workforce that has a focus on energy performance optimization and waste minimization practices to help companies reduce costs and maximize profits. Students who complete the program will be ready for a technical career in manufacturing industries, with an emphasis on industrial energy efficiency and waste minimization. In addition, the curriculum will enable Iowa manufacturers to provide this training for their current employees.

Students who complete the program will be ready for a technical career in manufacturing industries, with an emphasis on industrial energy efficiency and waste minimization. In addition, the curriculum will enable Iowa manufacturers to provide this training for their current employees. When implemented on-the-job, these students and employees will be able to assist their companies in lowering raw material and nonrenewable energy use per unit output, improving production efficiencies, and reducing the generation of wastes.

Project partners will ensure the Industrial Electro-Mechanical Technician curriculum is effective and disseminated nationwide, satisfying industries' needs for technicians, operators and maintenance workers trained in energy efficiency and waste minimization. The end-result of the project will be an industry-verified program that validates the recipients' knowledge and ability to impart energy and waste-saving designs and processes for specific industries.

Target Area: State-wide